MATLAB-JIRA Connection

"MATLAB-JIRA Connection" is a MATLAB utility to access Jira projects.

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Version: 1.0 - Initial Version.

Introduction

Jira is a proprietary software development tool developed by Atlassian that allows issue tracking and software project management. It is built for every member of the software team to plan, track, and release great software.

Apart from using Jira development environment, it provides REST API to build apps for Jira, develop integrations between Jira and other applications, or script interactions with Jira.

Reference: https://developer.atlassian.com/server/jira/platform/jira-rest-api-examples/

This "MATLAB-JIRA Connection" is an utility to developed in MATLAB to get Jira project and issue details using its APIs.

Authentication

The most important part to establish the MATLAB-JIRA Connection is Authentication. The preferred authentication methods for the Jira REST APIs are OAuth and HTTP basic authentication. This utility uses HTTP based basic authentication method for Jira connection which basically uses API tokens for enabling the login.

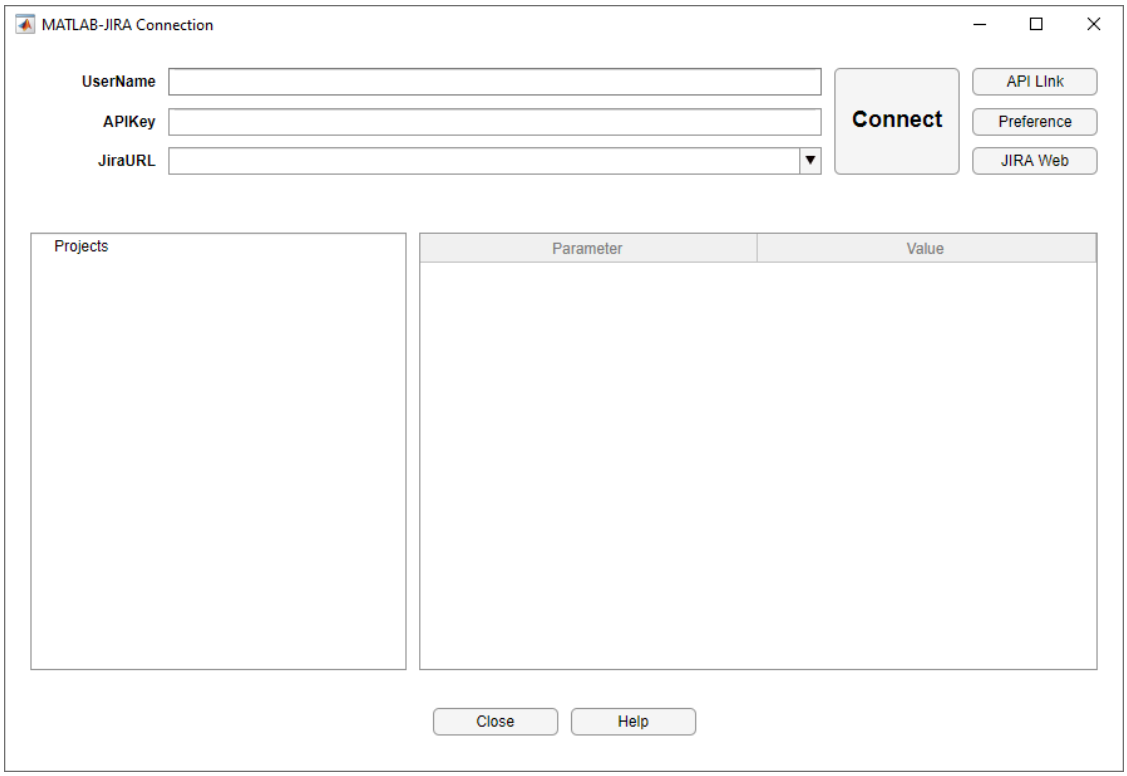
Jra users can generate an API token for their Atlassian account and use it to authenticate anywhere where they would have used a password. This enhances security because the users are not saving their primary account password outside of where they authenticate. They can quickly revoke individual API tokens on a per-use basis.

Reference: https://developer.atlassian.com/server/jira/platform/basic-authentication/

Launching the tool

Before launching the tool, add the JIRALink folder to the MATLAB path.

Then execute the command "JiraTool" in the MATLAB command window. to launch the tool.

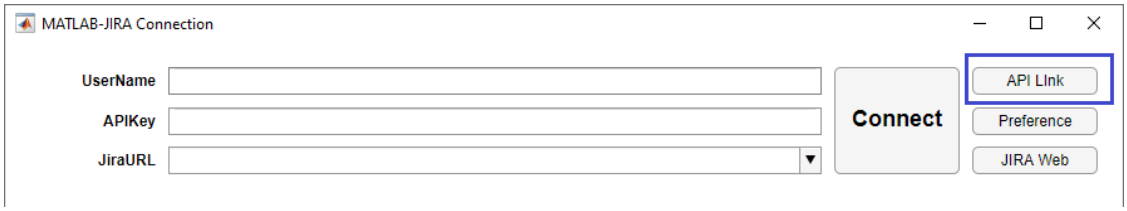


Creating the API Token

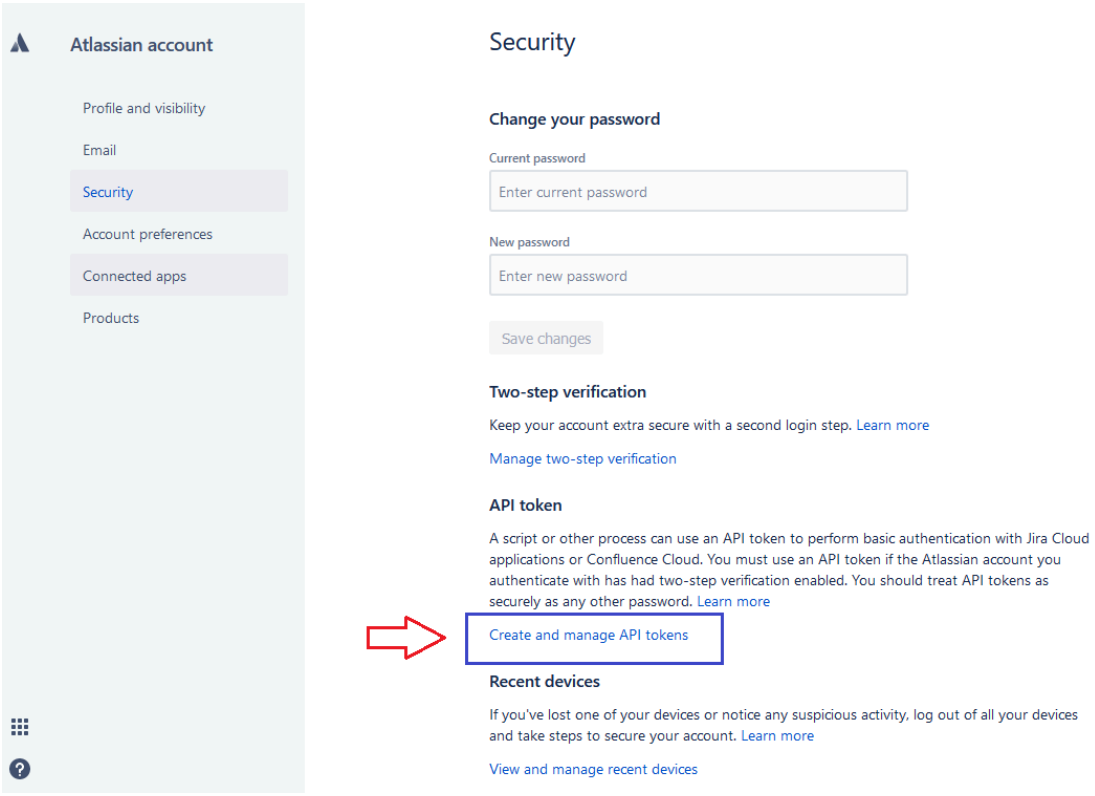
API token can be generated by following the information provided in the below link.

https://confluence.atlassian.com/cloud/api-tokens-938839638.html

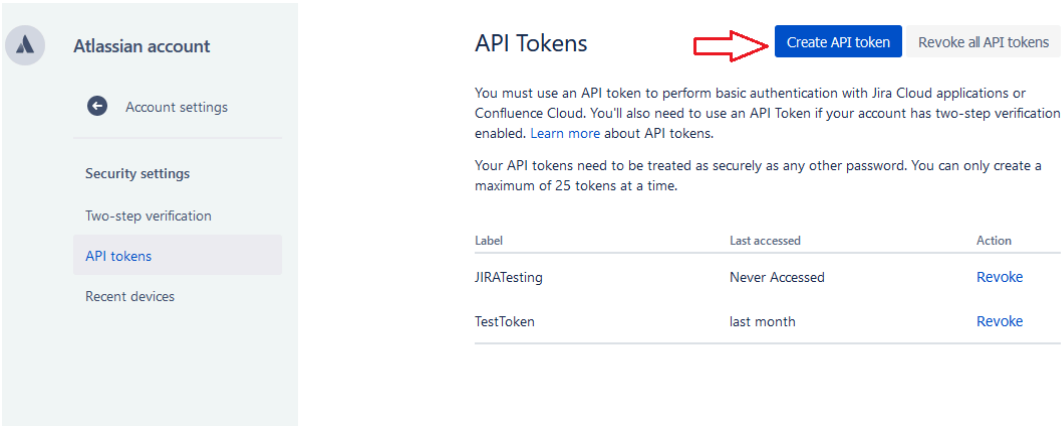
Alternatively, press the API Link Button in MATLAB-JIRA Connection GUI to launch the security settings page for the Jira account. APITokenButton



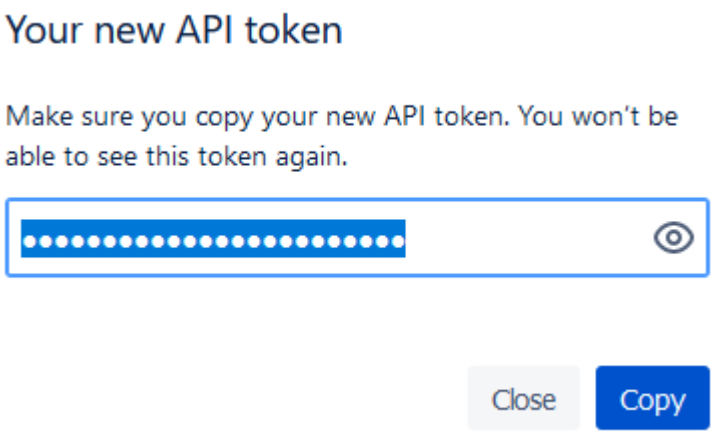
Then select "Create and manage API tokens" under "API token".



From API Tokens pages, use "Create API Token" button to create new API token with a custom label.



Copy the API key that is generated. This can be used to connect to the Jira account using APIs.

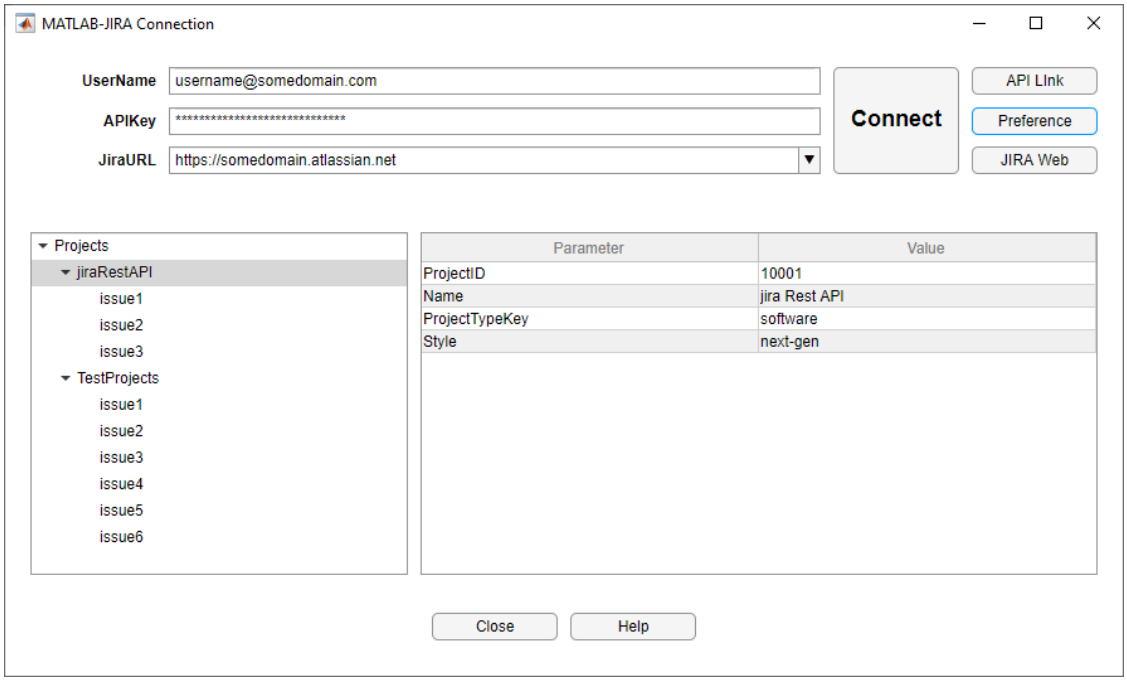


Using the credentials

1. Enter the JIRA account username in the UserName editfield
2. Enter the Generated API token in the APIKEY editfield
3. Enter the JIRA Project URL link in the URL editfield
4. Press the Connect Button for making connection with JIRA

Accessing Projects

MATLAB-JIRA Connection shows the projects and issues in a tree view. Click the projects or issues in tree to show the details in a tabular form.

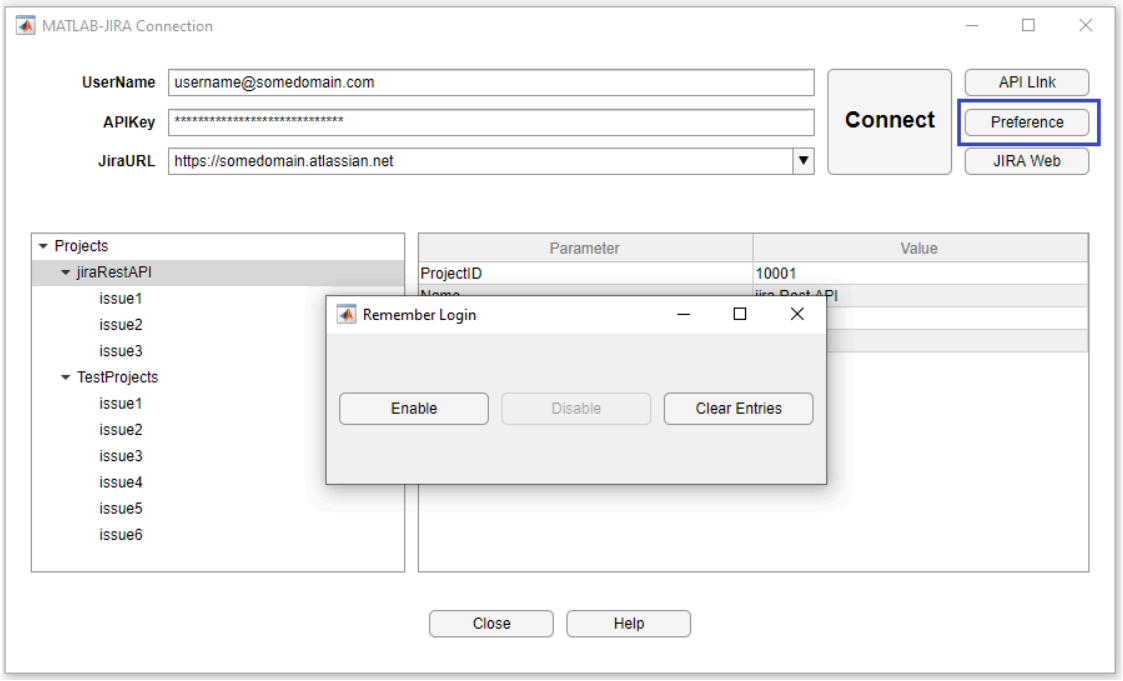


Preference Settings

To get the user preference to Enable/Disable storing user credentials which helps the user avoid remembering the API tokens.

Click the preference button, it will show the three buttons.

1. Enable -> it enables the utility to store and retrieve credentials in a mat file.
2. Disable -> it disables the utility in recording the user credentials.
3. Clear entries -> it clears the existing credentials recorded.



Note: This tool is a prototype to study MATLAB-JIRA Connection capabilities. It has features only to fetch Jira project and issue details. It does not have support to update the Jira projects/issues. Please share your comments and contact us if you are interested in updating the features further.

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